

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A display device comprising:

a matrix array of display elements (2) each driven by an input provided on a data conductor (6); and

data conductor addressing circuitry (9) for generating the inputs in response to input data,

wherein the data conductor addressing circuitry (9) comprises:

a plurality of controllable driver circuits (32, 34, 40), each for providing an input to an associated data conductor (6), wherein the number of controllable driver circuits is at least one greater than the number required for providing data to all data conductors (6); and

a reference driver circuit (30), outputting a constant reference current that does not change in response to said input data, wherein the reference driver circuit (30) is for dynamically calibrating at least one of the controllable driver circuits whilst the other controllable driver circuits provide inputs to the data conductors,

wherein each of said plurality of controllable driver circuits (32, 34, 40) includes a switching block (35) which enables the output of each of said plurality of controllable driver circuits (32, 34, 40) to be connected selectively to the reference driver circuit (30) during a first addressing period to perform a calibration operation and to a respective output of the display device in a further addressing period to perform a driving operation, and

wherein the calibration and driving operations for each of said plurality of controllable driver circuits (32, 34, 40) are interchanged during successive addressing periods.

2. (Original) A device as claimed in claim 1, comprising a matrix array of current-addressed display elements (2), each driven by an input current, and wherein the driver circuits (32,34,40) comprise current source circuits for providing an input current to the associated data conductor (6), and the reference driver circuit (30) comprises a reference current source.

3. (Original) A device as claimed in claim 2, wherein each display element is provided with an associated switching circuit for sampling the input current and subsequently providing the sampled input current to the display element (2).

4. (Original) A device as claimed in claim 3, comprising an active matrix electroluminescent display device.

5. (Original) A device as claimed in claim 1, comprising a matrix array of voltage-addressed display elements, each driven by an input voltage, and wherein the driver circuits comprise voltage source circuits for providing an input voltage to the associated data conductor, and the reference driver circuit comprises a reference voltage source.

6. (Previously Presented) A device as claimed in claim 1, wherein the number of driver circuits (32,34,40) required for providing inputs to all data conductors (6) is equal to the number of data conductors.

7. (Previously Presented) A device as claimed in claim 1, wherein the number of driver circuits (32,34,40) required for providing inputs to all data conductors is equal to a fraction of the number of data conductors, and wherein each driver circuit is for providing inputs to a group of data conductors in multiplexed manner.

8. (Previously Presented) A device as claimed in claim 2, wherein the number of current source circuits (60) required for providing currents to all data conductors (6) is equal to a multiple of the number of data conductors, and wherein the current for each data conductor is provided by the multiple number of current source circuits (60).

9. (Original) A device as claimed in claim 8, wherein the multiple number of current source circuits (60) providing current to an associated data conductor is selected from a group (11-18) having a larger number of current source circuits, and the multiple number is formed from a different selection from the group at different times.

10. (Previously Presented) A device as claimed in claim 1, wherein the reference driver circuit (30) is for dynamically calibrating each of the controllable driver circuits in a sequence, and wherein the controllable driver circuits not being calibrated together provide the inputs to all data conductors.

11. (Currently Amended) A method of providing drive signals to the data conductors (6) of a display device during a data addressing period, the display device comprising an array of display elements (2), the method comprising:

generating inputs to be provided to the data conductors in response to input data using a plurality of controllable driver circuits (32,34,40) selected from a number of controllable driver circuits which is at least one greater than the number required for providing inputs to all data conductors (6);

simultaneously dynamically calibrating the remaining at least one further controllable driver circuit (32,34,40) using a reference driver circuit (30),

~~wherein a different driver circuit or circuits are calibrated during different data addressing periods~~

wherein each of said plurality of controllable driver circuits (32, 34, 40) includes a switching block (35) which enables the output of each of said plurality of controllable driver circuits (32, 34, 40) to be connected selectively to the reference driver circuit (30) during a first addressing period to perform a calibration operation and to a respective output of the display device in a further addressing period to perform a driving operation, and

wherein the calibration and driving operations for each of said plurality of controllable driver circuits (32, 34, 40) are interchanged during successive addressing periods.

12. (Original) A method as claimed in claim 11 for providing current drive signals to the data conductors, the display device comprising an array of current-addressed display elements (2), the controllable driver circuits (32,34,40) comprising controllable current source circuits and the reference driver circuit (30) comprising a reference current source, and wherein the method comprises generating input currents in response to the input data.

13. (Previously Presented) A method as claimed in claim 11, wherein one driver circuit is used to provide the input to each data conductor.

14. (Previously Presented) A method as claimed in claim 11, wherein one driver circuit is used to provide the input to a group of data conductors in multiplexed manner.

15. (Original) A method as claimed in claim 12, wherein a plurality of current source circuits (60) is used to provide the input current to each data conductor.

16. (Original) A method as claimed in claim 15, wherein the plurality of current source circuits (60) providing the input current to each data conductor is selected from a group having a larger number of current source circuits, and the plurality is formed from a different selection from the group at different times.

17. (Previously Presented) A method as claimed in claim 11, wherein the reference driver circuit is used to calibrate each of the controllable driver circuits in a sequence, and wherein the controllable driver circuits not being calibrated together provide the inputs to all data conductors.